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ABSTRACT

This document chronicles some of the innovative uses of technology in the adult basic education and literacy field and the creative and cooperative efforts of local service providers to increase the instructional resources for learners. In 1-2 page profiles, it provides information about how the 50 states and the District of Columbia are using technology applications to provide instruction, increase program access, and expand staff development opportunities. Each profile contains information on the state contact, instructional applications, and staff development in the field of educational technology. The profiles were prepared based on information obtained from state directors of adult education and their staffs and by reviewing state plans, annual performance narrative reports, and Section 353 special projects. (KC)

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ADULT LEARNING & LITERACY

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# State Profiles of Technology Applications in Adult Basic Education and Literacy Programs

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Office of Educational Research and Improvement
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U.S. Department of Education
Office of Vocational and Adult Education
Division of Adult Education and Literacy
Washington, D.C. 20202-7240
July 1995



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## INTRODUCTION

The *State Profiles of Technology Applications in Adult Basic Education and Literacy* provide information about how states are using technology applications to provide instruction, increase program access, and expand staff development opportunities. This document chronicles some of the innovative uses of technology in the adult basic education and literacy field and the creative and cooperative efforts of local service providers to increase the instructional resources available to their learners. The information contained in this report is representative of the efforts of the states to use technology to its best advantage in providing adult basic education and literacy instruction. Profiles of 50 states and the District of Columbia are included.

The profiles were prepared based on information obtained from state Directors of Adult Education and their staff; and by reviewing the state plans, annual performance narrative reports and Section 353 special projects. Every effort was made to acquire current information about the uses of technology within adult basic education and literacy programs; however, the pace at which local and state staff are utilizing technology is moving so quickly that this document is not a comprehensive one.

Federal support for the purchase of hardware, software, and other technologies is obtained most frequently from Section 322 funds and Section 353 funds. A few states are participating in Federally sponsored distance learning programs, such as the Star Schools Program sponsored by the U.S. Department of Education. Other sources of funds include state funds, monetary and in-kind donations, the National Institute for Literacy, and the Tennessee Valley Authority.

All of the states are using technology, primarily computers and electronic mail, for administrative purposes. Frequent administrative applications include the use of management information systems to track student enrollments and to write state and Federally-required reports and to send the reports electronically to the state and Federal staff. Specific administrative applications of technology are not cited. The profiles were developed within the Division of Adult Education and Literacy, the Office of Vocational and Adult Education. This document may be ordered, free of cost, from the Clearinghouse on Adult Education and Literacy at the address below:

Clearinghouse on Adult Education and Literacy
U.S. Department of Education
OVAE/Division of Adult Education and Literacy
600 Independence Avenue, SW 20202-7240
FAX: (202) 205-8973

## ALABAMA

**STATE STAFF CONTACT:**
Mr. Rick Horn
Alabama Adult Literacy Resource Center
Gordon Persons Building, Room 5343
50 North Ripley Street
Montgomery, Alabama 36130
(205) 242-8181

**INSTRUCTIONAL APPLICATIONS:** Computer-assisted instruction is used in most of Alabama's 80 local programs. About one-third of the programs have some form of computer lab, ranging from two to three machines to ten or twelve machines. Business support of local programs has provided additional technological support at the local level. This ranges from providing a single computer to donation of fully equipped computer labs. In 1993 two companies provided $250,000 in technology for fully-equipped computer labs. Instructional materials are purchased at the local level. Through Section 353 funds, video tapes were developed to support the PACE Adult Basic Education Program.

Literacy instruction is also available on television and on video tapes. PBS programs such as LEARN TO READ are available to local programs. Since 1990, Alabama Public Television broads the complete KET GED series to all areas of the state without cost to the down-linked sites. The show has a toll free telephone number which enables viewers to participate in the course. Thus far, 10,000 people have inquired about the program, 5,000 have taken the qualifying test, and 3,300 have passed the test and participated in the GED classes.

**STAFF DEVELOPMENT:** Workshops are provided to staff on the use of instructional technology. "Tape Mate" (TABE), the instructional management system test, is included as part of the state curriculum, and there is reoccurring staff development workshops on use of this program. Training is provided on other programs as needed. When the local site purchases software, the vender provides teacher training to the site.

Distance learning technologies in the form of video teleconferences and television broadcasts are used whenever possible to expand the reach of inservice training to adult educators throughout the state. The state staff announce any reoccurring broadcasts on professional development and disseminate the information to all adult learning centers, which can pick-up the program. Any fees for the program are paid by the local site. If the program has wide applicability, it is broadcast state-wide, with the state paying any fees incurred in the broadcast.
The state is also downlinking the National Center on Adult Literacy's videoconference staff development series. The

"Technology, Learning Tools for the Future" was downlinked to sixty-seven county sites plus additional sites at the junior and technical colleges on April 28, 1994.

The state provides quarterly broadcast for staff development through the Alabama Adult Literacy Resource Center. The state also distributes videotapes for training. Through the Alabama Adult Literacy Resource Center, in cooperation with the Auburn University Educational Television, a staff development teleconference was transmitted to locations in all counties of the state, with over a thousand teachers, supervisors, and volunteers benefitting from this broadcast.

## ALASKA

**STATE STAFF CONTACT:**
Ms. Constance Munro
State Supervisor, Adult Basic Education
Department of Education
801 West 10th Street, Suite #200
Juneau, Alaska 99811
(907) 465-8714

**INSTRUCTIONAL APPLICATIONS**: A variety of instructional technology is being used in Alaska, including computers, audio cassettes, and videos. Programs in all areas of the state have computers for instruction. The Core Curriculum Library houses instructional materials for adult education programs to review and use. Among the available materials are instructional software packages. A catalog listing of library's materials is distributed annually to the adult education programs.

GED instruction is available through computer software programs and via television across the state. Cable television is available in villages with fewer that 1,000 people.

**STAFF DEVELOPMENT:**
Staff development is provided through many means, including FAX, the telephone, video tapes and electronic mail. Video tapes are being used successfully for staff development. A video tape, for example, from the Annual National State Directors Conference was distributed to 16 regions.

## ARIZONA

**STATE STAFF CONTACT:**
Dr. Gary A. Eyre
State Administrator
Adult Education Services
Department of Education
1535 West Jeffferson
Phoenix, Arizona 85007
(602) 542-5280

**INSTRUCTIONAL APPLICATIONS:** Arizona developed a regional plan to expand the technology resources available for both instructional programs and staff development. The state continues to offer high quality programs that employ the latest instructional material and computer assisted learning environments.

## ARKANSAS

**STATE STAFF CONTACT:**
Mr. Garland Hankins
Deputy Director
Adult Education Section
Department of Education
Luther S. Hardin Building, #506
Third Capitol Mall
Little Rock, Arkansas 72201-1083
(501) 682-1970

**INSTRUCTIONAL APPLICATIONS:** Technology is used in adult basic education programs throughout the state. Each of the 53 full-time adult education centers has at least eight computers. About 20 of the labs have computer learning stations which are networked with each other. All classrooms are encouraged to provide students with computer software, audio-visual materials, and videotapes.

ABE teachers are employing many other kinds of equipment in addition to computers and interactive video to supplement and enhance their curriculum. For many years, all full-time classes and selected part-time classes have used language masters, calculators, overhead and film projectors, tape recorders, and video cassette recorders. Most recently, VCR's have proven to be of great value to both teachers and students. Teachers are also using commercially prepared videotapes such as the GED-ON-TV series for small group instruction.

Whenever possible, Arkansas uses resources collaboratively. In FY 87-88, $300,000 was spent in a joint venture with Job Training Partnership Act (JTPA) and Special Needs to purchase 115 Apple II GS computers for use in full-time adult education programs. Another cooperative effort, begun in 1988 through the Special Needs and Exemplary Programs Section of the Carl D. Perkins Vocational-Technical Education Act, is establishing or upgrading computer assisted learning labs for approximately 40 educational programs. These arrangements enabled computer hardware and software to be purchased and maintained. In addition, computer lab staff were trained. A fully equipped mobile automated learning lab, donated to the state by the Energy Corporation, the parent organization to Arkansas Power and Light Company, began operating in seven eastern counties in 1990 as an adult education learning lab. Instruction in adult basic education, adult Secondary education, preparation for the GED test, and basic computer literacy skills is available through the lab.

Distance learning technologies are also being used to provide literacy instruction. Telecasting of adult education lessons is

provided throughout the state by the Arkansas Educational Television Network through the operation of the Adult Education Television Center. Both the "Learning to Read" and the "GED-ON-TV" series are broadcast throughout the state. The Arkansas Educational Television Network developed two videos, "Writing an Essay I" and "Writing an Essay II." A teacher's guide and a student workbook were developed through 353 funds to accompany the videos. The teacher's guide includes educational objectives, lesson plans, student activities, viewing activities, program content, pre-test and post-test, and glossary.

**STAFF DEVELOPMENT:** Arkansas ABE teachers are receiving annual in-service sessions updating them in the use of advanced technology for instruction, class management and report writing. Staff development training frequently employs the use of videotapes. Selected in-service sessions are videotaped and made available to ABE personnel on loan. This lending library continues to be expanded, with both state and commercially prepared tapes being available.

## CALIFORNIA

**STATE STAFF CONTACT:**
Dr. Robert A. Cervantes
State Director
Adult Education
Department of Education
P.O. Box 944272
Sacramento, California 94244-2720
(916) 322-6535

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction (CAI) is widely used in adult basic education and literacy programs in California. This effort was strengthened by two technology projects funded in California by the National Institute for Literacy (NIFL). The Family English Literacy Program (FELP) received a $99,000 grant in 1992 to implement the "Project to Promote the Successful Use of Technology for Assisting Adults with Families to Improve their Literacy Skills" in Chula Vista. This project is providing English language, literacy and parenting skills to undereducated parents with limited English proficiency. While parents are in the classroom, their children receive homework assistance, basic skills training and enrichment activities. To extend the benefits of FELP in the classroom and into the home, the NIFL grant will enable the project to add technology, such as a new video laser disc capability, to extend the range of available parent/child literacy activities.

Education Code Section 52522, authorized the Superintendent of Public Instruction to approve plans which allow local school district conducting Adult Education programs to use up to 5% of their adult education Americans with Disabilities Act entitlement for the purpose of innovative and alternative instruction delivery methods. Thirty-six districts have been approved to use various forms of distance learning, computer technologies, or combination of those two approaches to reach students.

The Distance Learning Project is establishing a statewide delivery network for distance education products which will be available to all districts that conduct adult education programs. This project is serving as the groundwork for establishing programs to meet the diverse needs of adults needing literacy education and who are not usually served in the more traditional adult school venues. The activities of this project will be coordinated with other existing California Department of Education adult education efforts.

**STAFF DEVELOPMENT:** Through the use of 353 funds, California established and maintains the Outreach and Technical Assistance Network (OTAN). This network provides technical assistance, staff

training and information to adult education service providers. A major component of this effort is an electronic communication system. The telecommunication component also contains information on state and National legislation, lesson plans, and research articles. This information can be assessed through a key word on-line searchable data base. Through the computer-based electronic communication component, the network connects all state-funded adult education agencies and serves as a medium for electronic communication (e-mail) and offers access to a knowledge base of adult education resources consisting of more than 11,000 documents and files.

OTAN Online initiated a pilot project to provide full Internet access. The entire knowledge base can now be accessed via the Internet information sharing protocols of Gopher and World Wide Web. The pilot project will offer statewide 800 telephone access to the OTAN home page which will serve as a gateway to a national virtual literacy database interconnecting dozens of literacy resources. In addition, OTAN will offer a robust electronic mail system via a software package called First Class.

One objective of the OTAN Project is to "broker" video conferences appropriate for the adult education community. Project staff arrange downlink sites throughout California and then direct viewers to the nearest viewing site. Content delivery (uplink) is provided by formal OTAN partners including the National Center on Adult Literacy, Public Broadcasting Service, National Institute for Literacy, and the National Adult Education Professional Development Consortium (NAEPDC). NAEPDC uplinked a videoconference entitled, "Countdown to Reauthorization: The First Hundred Days." The focus of this video conference was on legislation that will govern the future of adult education for the next five years. In response to request for copies of the downlink tape and field support materials, OTAN has requested and received permission from the NAEPDC to duplicate the tape and materials and make them available on a cost recovery basis.

The OTAN Project developed a planning process to assist 321 funded projects with technology implementation. The technology planning efforts, currently underway as six local adult education agencies, guide all staff through the process of building a vision, identifying student needs, making informed hardware and software decisions, and evaluating implementation efforts.

## COLORADO

**STATE STAFF CONTACT:**
Ms. Dian Bates
State Director, Adult Basic Education
Division of Adult Education
Department of Education
201 E. Colfax Avenue
Denver, Colorado 80203
(303) 866-6611

**INSTRUCTIONAL APPLICATIONS:** About 25 percent of the local programs use computers for instruction. Some programs use equipment through partnerships formed with JTPA providers or local businesses. Most of the computer-assisted instruction focuses on math instruction. In addition, GED is broadcast on a public television channel.

**STAFF DEVELOPMENT:** The Colorado Adult Education Office encourages the use of technology to facilitate staff development. The Office is working with the Colorado Department of Education to survey local adult education programs in the spring of 1995 to determine the level of distance learning technology being used for both student instruction and for staff development. Some staff development programs are received at down link sites and then provided through video copies to instructors at all local program sites.

## CONNECTICUT

**STATE STAFF CONTACT:**
Roberta Palowski, Chief
Bureau of Adult Education and Training
Division of Educational Programs and Services
25 Industrial Park Road
Middletown, Connecticut 06457
(203) 638-4035

**INSTRUCTIONAL APPLICATIONS:** Over 80% of the adult education providers have stand alone computers, mostly Apples, in the classroom. A variety of software packages for employed for specific instructional purposes. Several program providers use a computer lab format for the delivery of computer assisted instruction to a basic skills and GED student population. The curriculum on which the instruction is based varies among providers with the following being the most prominent: Jostens, WICAT, CCP, CCC, and custom-designed IBM packages.

Workplace literacy programs in the state have developed customized computer-assisted instruction programs for use with local industries. The instructional packages specific to those companies and focus on job-related vocabulary in an advanced ESL setting.

The Bureau of Adult Education and Training, in collaboration with the Community-Technical College System, offers cable access to KET's GED program. In addition, several local adult education programs make their own GED preparation program available through cable television.

**STAFF DEVELOPMENT APPLICATIONS:** Connecticut provides its staff development (353) funds to the Adult and Training Development Network (ATDN). ATDN has the capacity to provide, through its satellite dish, workshops and presentations built around downlinks and interactive video broadcasts. ATDN also affords a linkage to Internet and to OTAN. This telecommunications capacity enable teachers and administrators to search databases on-line, conduct action research and review staff development initiatives across the country.

## DELAWARE

**STATE STAFF CONTACT:**
Dr. Fran Tracy-Mumford
State Supervisor
Adult and Community Education
Department of Public Instruction
P.O. Box 1402
J. G. Townsend Building
Dover, Delaware 19903
(302) 739-3743

**INSTRUCTIONAL APPLICATIONS**: Instructional technology was purchased for use across the state, on a rotating basis, by all of the adult education programs. Ten computers are currently available for rotation. A PALS lab is in use in one program while six other programs have computer labs.

IBM's partnership with the Literacy Volunteers of America affiliate in New Castle County continues to open the IBM facility's computer lab to literacy tutors and learners. Computer managed instruction is in full use across programs. This program received the highest state honor as an Exemplary Instructional Technology program for three consecutive years.

Examples of other uses of technology include the computer-managed program, "Learning Unlimited," which permits the development of individualized learning plans for each student. Video tapes of classes are being made for a home study program. The state has taped instructional courses and placed them in libraries. Delaware is tapping into the "Technology for the 21st Century" Fund to purchase computers for all programs in the state. Funds will be available in fiscal year 1996.

**STAFF DEVELOPMENT**: Delaware is accessing national video teleconferences as a means of expanding their staff development opportunities.

## DISTRICT OF COLUMBIA

**STATE STAFF CONTACT:**
Dr. Constance R. Clark
Associate Superintendent
SEA/LEA Operations
and Special Programs
Logan Administrative Building
215 G Street, N.E.
Washington, D.C. 20002
(202) 724-4980

**INSTRUCTIONAL APPLICATIONS**: Computer-assisted instruction is being used in many programs. Project CALL is using the PALS computer lab.

**STAFF DEVELOPMENT APPLICATIONS**: At the Lenox Adult Ed Center, a series of staff development activities were conducted to introduce teachers and aides to basic computer processes.

## FLORIDA

**STATE STAFF CONTACT:**
Dr. John E. Lawrence
Chief, Bureau of Adult
and Community Education
Department of Education
FEC Building, Room 1244
325 W. Gains Street
Tallahassee, Florida 32399-0400
(904) 487-4929

**INSTRUCTIONAL APPLICATIONS**: Local ABE programs are using the computer-assisted instruction of their choice. Computers are beginning to go into the homes of adult learners. Some of the computers are being networked via telephone. The Neighborhood Outreach Program has leaders in rural areas opening their homes for two to three hours a day so students can re-enforce their literacy skills on the computer. Lap top computers are being placed in homes. The state is buying 40 lap tops for four counties in the Panhandle area, which have the lowest level of academic learning. Begining in 1995, the children of the families using the laptops are targeted for a pilot Family Literacy Program. Technology is being purchased under some of the 353 projects. In the project, "Connecting with Technology," a computer lab was established at Seminole Community College for use by 42 adult basic education learners.

The Kentucky Education Television series is being broadcast. In addition, the GED is being broadcast to most of the state. Two newer instructional series are being televised on PBS, cable and instructional television. Classrooms are receiving broadcasts from the instructional television series.

Under the 353 project, "Televised Adult Basic Education," GED instructional programming was broadcast by 10 Florida PBS stations. During this pilot effort, 483 adults enrolled in GED-ON-TV. Encouraging results are being achieved with incarcerated adults and with emotionally disturbed students.

**STAFF DEVELOPMENT:** The "Train the Trainer" series will be broadcast live and taped for later in-house use. The Palavin staff development series will also be taped.

## GEORGIA

**STATE STAFF CONTACT:**
Dr. Jean DeVard-Kemp
Assistant Commissioner
for Adult Literacy
Department of Technical and Adult Education
1800 Century Place, N.E., Suite 400
Atlanta, Georgia 30345-4304

**INSTRUCTIONAL APPLICATIONS:** In 1995, a stand alone computer lab was provided to 83 counties which had full-time teachers. Over five years, funding for full-time teachers and ten-station labs for each of Georgia's 159 counties is being provided by the state legislature and state lottery funds.

A Software Review Committee is evaluating adult education software. The Committee's recommendations form policy for developing a basic software package that will be made available to all program sites having full-time teachers. The package will include software for literacy levels I, II, and III; beginning, intermediate and advanced ESL; and GED preparation.

Fourteen sites in Georgia are using NovaNet, which is a comprehensive networked instructional package. NovaNet designed an Adult Literacy program for Georgia which includes an instructional series for low-level readers.

In 1994, all 159 counties were provided with special needs equipment for low-level readers and for ESL students. The equipment included accessible computer tables, Eiki (Bell and Howell) Language Masters which teachers can program with vocabulary words, Franklin Learning Language Masters that are pre-programmed with 80,000 words, magnifying glasses, rheumatic writing pens, color overlays, braille labelers, and Q-Solution devices which read bar-coded books to students.

In cooperation with the Center for Rehabilitation Technology (CRT) of the Georgia Institute of Technology, with CRT, Inc., and Literacy Action, Inc., the Department of Technical and Adult Education participates in one of Georgia's largest distance learning projects. Through this project, reading instruction for low-level readers is broadcast with a live class at Georgia Tech. The satellite broadcast is received by 87 classes in 66 locations.

**STAFF DEVELOPMENT:** Staff development 353 funds provided instruction for teachers in DOS and Windows at the Georgia Literacy Resource Center. Staff at all 14 sites with NovaNet have been trained.

The state is distributing many videotapes for staff development. Areas of concentration at the moment are the learning disabled, attention deficit disorder, and special needs learners. In addition, teachers have received instruction for operating special needs equipment, such as the language masters, which were distributed to all counties.

Teleconferencing for staff development is available through GSAMS, a telecommunication program at Georgia's Technical Institutes. Georgia is downlinking the National Center on Adult Literacy's series of video teleconferences for staff development. The sites are set up throughout the state by GLRC. As staff development needs are identified, the Resource Center will produce teleconferences to respond to those needs.

## HAWAII

Ms. Linda Y. Chung
Administrator
Youth and Early Childhood Section
Department of Education
Hahione Elementary School
595 Pepeekeo Street, H-2
Honolulu, Hawaii 96825

**INSTRUCTIONAL APPLICATIONS**: The state is using community resources, such as Project Literacy United States (PLUS), to enrich the instructional program. PLUS provides a working link with the American Broadcasting Company and the Public Broadcasting System and their local affiliates, KITV and KHET, respectively, to generate awareness of national efforts to reach and improve instruction to functionally illiterate target groups.

Audiovisual materials such as television sets, VCRs tapes screens and microphones are available for instructional purposes. Three schools have literacy learning centers and the necessary hardware for computer assisted instruction. WITCAT and the Josten programs are using in the schools.

Distance learning technology is linked to all the islands, enabling teleconferences and instructional programs to be broadcast among the islands. The PBS station has permission to use the KET GED series. In addition, Kauai (island) uses the KET series for their community GED programs, low level readers, math programs and additional KET produced materials. The State Office is working with cable television companies to explore the feasibility of establishing learning centers in both out-of-state and in inter-island (Hawaii) locations.

**STAFF DEVELOPMENT**: In order to improve the quality of the adult basic education program, the state staff will facilitate the acquisition of quality video programs for instructional and program improvement purposes. Training sessions are videotaped and loaned out to interested local sites. Since video conferences and presentations cannot be hooked up live, the state also receives video tapes from national programs.

## IDAHO

**STATE STAFF CONTACT:**
Dr. Shirley Spencer
Director, Adult Education
Department of Education
Len B. Jordon Office Building
650 W. State Street
Boise, Idaho 83720
(208) 334-2187

**INSTRUCTIONAL APPLICATIONS:** All of the adult education centers have some computer assisted instruction capacity. The Idaho Adult Success Center developed some interactive curriculum in the areas of reading, spelling, and English as a Second Language. The literacy coordinators have also provided tutors to the public library in Twin Falls to assist adults in using computer assisted literacy instruction. Public television broadcasts of the KET GED series is currently funded under the state workplace literacy grant. These broadcasts will be continue under the Adult Basic Education grant if response warrants such action.

## ILLINOIS

**STATE STAFF CONTACT:**
Mr. Dan Miller
Director, Adult Education
Adult, Vocational and Technical Education
State Board of Education
100 N. First Street - E-439
Springfield, Illinois 62777
(217) 782-3370

**INSTRUCTIONAL APPLICATIONS:** The Illinois State Board of Education promote the use of computer aided instruction in the adult education classroom. Several local programs increased their computer lab facilities. All service centers loaned out several software programs and video tapes to instructors. Computer assisted instruction is being used in many local literacy programs.

Distance learning technology is gaining in acceptance. NOVANet is being used as well as KET broadcasts to extend access to literacy instruction.

**Staff Development:** Teleconferencing is providing inservice for teachers and administrators throughout the state. A two day in-service was organized for program representatives in the use of modern technology. Topics covered included the use of technology for assessment, interpretation of assessment data, development of curriculum and instructional strategies and evaluation of student performance and program outcomes. One service center organized six interactive television programs with multiple viewing sites across the nation. Over 31 states participated in these network events.

## INDIANA

**STATE STAFF CONTACT:**
Ms. Carlotta Anderson
Director, Division of Adult Education
Department of Education
State House, Room 229
Indianapolis, Indiana 462004
(317) 232-0522

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is being used with many programs. Some IBM-PALS labs are being used. Most local programs are linked through IdeaNet so that curriculum and instructional practices can be shared. The Literacy Resource Center provides technical assistance to local programs concerning instructional technology. KET/GED tapes are also being used.

## IOWA

**STATE STAFF CONTACT:**
Mr. Donald L. Wederquist
Chief, Adult Education
Department of Education
Grimes State Office Building
Des Moines, Iowa 50319-0146
(515) 281-3671

**INSTRUCTIONAL APPLICATIONS:** Several instructional technology applications are being used, including computer assisted instruction and the PALS laboratories. Instruction is also available via Iowa Pubic Television, which broadcasts the GED-ON-TV and Project Second Chance instructional series.

## KANSAS

**STATE STAFF CONTACT:**
Ms. Janet Stotts
Director, Adult Education
Department of Education
120 East 10th Street
Topeka, Kansas 66612
(913) 296-3191

**INSTRUCTIONAL APPLICATIONS:** All programs have access to computers, with about ninety percent of them using some computer assisted instruction. Software being used includes Plato, Josten's materials and the IBM PALS's system. Computer assisted instruction is also incorporated in ESL programs.

Distance learning technologies offer access to literacy instruction through local PBS stations, which broadcast the KET GED-ON-TV series and the LEARN TO READ series. Video tapes are a popular instructional method with the adult learners.

**STAFF DEVELOPMENT:** Teleconferences are downlinked on a limited basis for staff development. An interactive television studio is available for staff development inservice broadcasts.

## KENTUCKY

**STATE STAFF CONTACT**:
Ms. Teresa M. Suter
Commissioner
Kentucky Department for Adult Education
and Literacy
500 Metro Street
Frankfort, Kentucky 40601
(502) 564-5114

**INSTRUCTIONAL APPLICATIONS**: Computer assisted instruction is used in the majority of adult basic education and family literacy programs and in volunteer services. All essential workplace skills programs are employing computer assisted instruction.

The State Office installed a satellite dish at the State Literacy Resource Center, enabling the staff to download instructional broadcasts from PBS, Kentucky Education Television (KET), and other television services. KET coordinates instructional programs with the Kentucky Department of Education and assists in awareness and recruitment activities through pubic service announcements, advertising, and a toll-fee KET telephone number.

KET Network broadcasts three adult education television series. They are: (1) LEARN TO READ, which gives adult learners a solid foundation in the reading basics; (2) ANOTHER PAGE, which is designed to improve reading comprehension and application; and (3) GED STUDY-AT-HOME, which prepares adults for the General Educational Development test.

**STAFF DEVELOPMENT**: New teachers are able to utilize software during staff training programs held at the State Literacy Resource Center (SLRC), which provides information and assistance in identifying technology and courseware appropriate for adult basic education programs. Installation in the Resource Center of a local area network is facilitating the use of instructional software and databases. The library materials at the Resource Center were placed in a computerized database, allowing a quick search of all the Center's materials.

An electronic communication system was established between the SLRC and the main offices of the Kentucky Department for Adult Education and Literacy. This capability is the precursor for statewide transmission of data and adult education information between the Resource Center and all service providers throughout the state.

The state staff are maintaining nationwide computer links to services such as DiAL-IN, OTAN, ED Board, America Online, and the

Internet. The staff also formed a partnership with KET to deliver teleconferences to adult education administrators and practitioners across Kentucky.

Conferences on computer assisted instruction applications are held periodically in the state. The KET and Kentucky Literacy Commission sponsored four KET teleconferences on learning disabilities topics.

## LOUISIANA

**STATE STAFF CONTACT:**
Mr. Glenn Gossett
Director, Bureau of Adult
and Community Education
Department of Education
P.O. Box 94064
Baton Rouge, Louisiana 70804-9064
(504) 342-3510

**INSTRUCTIONAL APPLICATIONS:** Computers are being used primarily to supplement literacy instruction. Over 30 programs statewide offer computer assisted instruction to adults in reading, writing, mathematics, and computer literacy. Commercial software and locally developed software are used in these programs. The programs utilize a variety of software, including GED 2000 and the PALS lab.

Through a partnership between General Motors (GM) and a local literacy program, work related instructional plans were devolved, with the actual instruction being delivered through computer assisted instruction. GM furnished all equipment, supplies, and facilities.

Distance learning technologies are being utilized. Television is used extensively as an instructional tool. The State Office, in cooperation with Louisiana Public Broadcasting (LPB), sponsored GED-ON-TV and LEARN TO READ. LPB also ran a motivational series called ACCESS, to encourage viewers to enroll in adult education programs. Literacy programs operated in public school facilities often have access to satellite dishes and downlinking capability.

**STAFF DEVELOPMENT:** Distance learning technologies are augmenting staff development opportunities, especially for instructors in rural programs. North Western State University has a teleconference capacity for training while Southern University has a college course called "Computer Assisted Instruction." Television is utilized for courses needed for certification of Adult Education Teachers, because teachers in full-time positions must have the special certification. Educators can obtain college credit and training from the television courses. For instructional personnel, videotapes on the Laubach method of tutoring are available in every public library in the state.

## MAINE

**STATE STAFF CONTACT:**
Dr. Paul (Randy) Walker
Director
Adult and Community Education
Department of Education
State House Station 23
Augusta, Maine 04333
(207) 287-5854

**INSTRUCTIONAL APPLICATIONS**: Computers and a large number of software programs are being used to help adults learn basic educational skills and to become computer literate. The Division of Adult and Community Education and local education directors have participated with the University of Maine - Augusta in the development of 46 interactive telecommunication sites at local high schools. The interactive television system afford easier access to adult education programs statewide.

The Maine Public Broadcasting Network, in cooperation with the Maine Literacy Coalition, continued its LEARN TO READ services, GED-ON-TV, and Read to Me series. The benefit has been especially significant in rural areas of the state.

**STAFF DEVELOPMENT**: Instructional television is expanding training opportunities for ABE tutors.

## MARYLAND

**STATE STAFF CONTACT:**
Mr. Charles Talbert
Director, Adult Education and Literacy
Services Branch
Division of Career Technology and Adult Learning
Maryland State Department of Education, 3rd Floor
200 West Baltimore Street
Baltimore, Maryland 21202
(410) 333-2361

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is availabe in almost all of the local ABE programs. In addition, special efforts are underway to expand the availability of instructional technology. In 1994, a partnership was formed between the Maryland State Department of Education and Johns Hopkins University Applied Physics Lab to examine the use of technology in adult education programs, to create a vision and to develop an implementation plan for instructional technology. As a result, a survey to identify current instructional technology applications and the availability of equipment, was sent to 137 local adult education programs, with a 81 programs responded. Concurrently, a steering committee, which included representatives from the adult education literacy network, established priority areas, specific goals and objectives.

In 1995, two working groups are exploring applications of computer assisted instruction. One group is developing an ESL intake/registration system which presents registration information in the learner's native language. The second group is identifying multimedia instructional models for ABE, ESL and special needs population learners.

In addition, a special task force is locating collaborative models that enable programs to access local educational systems's computers and other technologies. The task force is also reviewing the possibility of forming linkages with technology projects or initiatives that are in development, both inside and outside, the state.

**STAFF APPLICATIONS:** A variety of staff development activities are being offered to literacy instructors. Some local ABE programs are giving training on computer literacy. Through the State Office, an annual adult education summer institute offers demonstration workshops of software applications and other technologies, such as Instructional Framework.

Instructional Framework is a multimedia teacher training tool. It is available in at least ten local adult education sites. To

enhance their teaching skills, teachers access the Instructional Framework's database of best practices, review sample lesson plans and see a video demonstration of the practices which they select.

## MASSACHUSETTS

**STATE STAFF CONTACT:**
Mr. Robert Bickerton
Director, Adult and Community Service
Department of Education
350 Main Street - 4th Floor
Malden, Massachusetts 02148
(617) 388-3300 ext. 353

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is available in many literacy programs. NOVANet is used in some programs, such as the adult education program at the Bristol Community College in Fall River, to provide instruction via a telecommunications system. Two major resource centers and several of the larger learning centers provide informaiton concerning software and audio visual materials.

Several technology endeavors are being supported through 353 grants. A software review database was developed through one such grant. A CAI program for learning disabled adult readers at the Learning Connection/Adult Learning Center was produced through another grant.

English as a Second Language instruction is provided through the Take and Give Program (TAG). The project teaches English to those recent Asian immigrants who most need instruction. TAG trains recent graduates of ESL to tutor students who have no English skills. The program combines tutoring with a home-study program of bilingual video lessons and written materials to enhance literacy skills.

## MICHIGAN

**STATE STAFF CONTACT**:
Dr. Ronald M. Gillum
Director
Office of Adult Extended Learning
Department of Education
P.O. Box 30008
Lansing, Michigan 48909
(517) 373-8425

**INSTRUCTIONAL APPLICATIONS**: Both CAI and distance learning technologies are employed in adult literacy programs. Telecommunication capaciaty is available through the project, "Connections: A Strategy for Michigan's Future Through Telecommunications." Through this project, the adult education program at Mott Adult High School used the Michigan State-wide Telecommunications Access to Resource Network (M*STAR) to augment its literacy instruction. The project employs stand-alone computers and software to supplement classroom instruction in grammar, writing, math, and self esteem. Students at the Sarvis Center, which is one of Mott Adult High School's primary sites, are served by the CABS Lab. These adult learners included persons with disabilities and those enrolled in adult basic education, ESL classes or GED programs.

The North Oakland County Adult Education Coalition is developing an integrated adult technology-based multimedia curriculum and implementation plan which reinforces educational outcomes for individual student development. This integrated currciulum is being accomplished through correlating research on technology and software into stduent learnng activities. In addition, site-based planning is strengthening professional development at the learning centers.

The Caro Community Education Project increased student proficicency in both literacy and job skills by using computer software which pressents actual on-the-job situations. As part of their English, speech, and computer classes, class members filmed a video protfolio demonstrating their literacy skills. The video can be reproduced and shared with prospective employers.

**STAFF DEVELOPMENT**: The Adult and Community Education Instructional Services program in Grand Rapids developed a staff manual, "Model for Implementing Technology in the Adult Basic Educaiton Curriculum," as a guide in selecting computer assisted instruction programs for basic skills. The manual includes all the materials necessary to implement the model, including forms, tutorial diskettes, overhead transparencies and necessary documentation for use with IBM compatible computers.

## MINNESOTA

**STATE STAFF CONTACT:**
Mr. Brian Kanes
Coordinator
Adult Basic Education
Department of Education
995 Capitol Square Building
550 Cedar Street
St. Paul, Minnesota 55101
(612) 296-8311

**INSTRUCTIONAL APPLICATIONS**: Computer assisted instruction is employed throughout the state in all programs, largely with IBMs and Apple IIs. All programs associated with a local education agency have access to MAC II's. The State Literacy Resource Center, under the auspices of Minnesota and South Dakota, maintains collections of information and linkages to other adult basic education and literacy technology resources.

In November, 1994, the St. Paul Hubbs Center for Lifelong Learning was dedicated to provide state-of-the art technology for adult literacy instruction. It is the first building to be designed and dedicated solely for providing adult literacy and lifelong programs through the use of technology.

The state staff continues their efforts to expand the use of technology in adult education programs. The staff is working with rural sites to determine how these programs can work cooperatively with each other and share technology services. The staff is also looking at interactive video and video disk technologies that will work effectively in adult education programs.

**STAFF DEVELOPMENT**: Workshops were held in 1989-90 to give teachers the technology skills they needed to enhance their instructional effectiveness and productivity. Continuing inservice activities conducted across the state focus on the use of instructional applications of technology.

## MISSISSIPPI

**STATE STAFF CONTACT:**
Ms. Eloise Johnson
Director of Literacy
State Board for Community
and Junior Colleges
Education and Research Center
3825 Ridgewood Road
Jackson, Mississippi 39211
(601) 982-6344

**INSTRUCTIONAL APPLICATIONS:** Programs located in vocational education buildings are using computer assisted instruction. Funds to purchase computers were obtained from the Tennessee Valley Authority and the Appalachian Regional Commission.

Among the programs using technology are those located at the Greater Columbus Learning Center, Jackson State University, and Hattiesburg. In Jackson, "The Ready Course, An Interactive Videodisc-Assisted Reading Program," assists at-risk adult learners who find traditional methods inadequate.

Mobile vans provide literacy instruction at five work sites. This effort is strengthened by several industries which donated funds for the vans. Mississippi Power and Light donated two vans to community colleges. ABE funds pay for the instructors. In addition, a van provides instruction at a jail one day a week.

A portion of the state's 353 funds help support the Mississippi 2000 project, which uses IBM, Apples, fiber optics and the telephone for a distance learning capacity. Four ABE sites will use this interactive system for instruction. Eventually the system will be used for inservice.

**STAFF DEVELOPMENT:** Two teacher training sessions were conducted using the Fibernet 2000 program that involves Mississippi State University, Mississippi State Educational Television, and four public schools. Adult education teachers met at the four Fibernet 2000 sites to observe training in GED Essay Writing Skills. Using this program, the teachers were able to interact with the presenter. By using the ETV system, 130 teachers received inservice training at a cost of less than $200 per person.

## MISSOURI

**STATE STAFF CONTACT:**
Mr. Elvin D. Long
Director of Adult Education
Department of Elementary
and Secondary Education
P.O. Box 480
Jefferson City, Missouri 65102
(314) 751-0887

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is available to adult students in all learning centers and in most class sites in Missouri. The PALS Computerized Learning Systems for Level I students and other IBM based systems for instructional and management tasks were purchased by the State Adult Education office for some larger programs. The State Office purchased twenty "Integrated Learning Systems" to serve adult students with skills from 0 - 12.9. The systems include a file server and from 6 to 10 student work stations with software for testing, generating prescriptions, guiding students through lessons and developing management reports.

One hundred and fifty "laptop" computers, equiped with instructional software, were purchased in 1994 for use in remote class sites where use of more elaborate CAI equipment is not practical. TABE-PC was purchased to be installed on all CAI systems.

Many teachers report that the computerized instructional equipment is popular with students. A 353-funded study is planned to determine the most effective use of the Integrated Learning Systems.

Three fifty three funds helped to support distance learning projects which broadcast GED-ON-TV lessons. Several adult education programs make use of this series as well as other videotapes to supplement individualized instruction.

**STAFF DEVELOPMENT:** Teachers who use the CAI systems and Integrated Learning Systems received extensive training in these systems.

## MONTANA

**STATE STAFF CONTACT:**
Dr. Robert Ruthemeyer
Director, Adult Education
State Office of Public Instruction
Office of the State Superintendent
State Capitol Building
Helena, Montana 59602
(406) 444-4443

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is installed in at least 24 learning centers. Both Apple computers and IBM's are being used. Comsat is being used to provide GED instruction for homeless adults. Computer assisted instruction is providing ABE and GED instruciton in several correctional facilities in Montana. The Billings ABE Center, in cooperation with Yellowstone County, has added a full-time instructor to to provide ABE instruction, including computer assisted instruction, to adults incarated at the Yellowstone County Jail. PLATO is operational at Montana State Prison, the Women's Correctional Center, Swan River Correctinal Training Center, the Mental Hospital at Warm Springs, at several Progation and Parole Offices, at Half Way Houses and at ABE programs. The PLATO systems are being used to meet the education and training challenge posed by a legislative mandate to reduce ocercrowding and stem offender receidivism.

A project, "Native American Parents as Teachers of their Children," developed three culturally relevant family literacy instruction guides and videos for Native Ameridan parents. These materials provide guidance to Native American parents who want to work with their children on reading and math skills. The materials are integrated into exising adult literacy or basic education programs, while acknowldeging and accommodating the cultural differences of Native American populations.

The Montana State system is using METNET with the computer server located at the office of Public Instruction where technical assistance for system maintenance is available. The State Director of Adult Education publishes an electronic paper at least once a week for adult educators in Montana. There will be Section 353 funds available for NETNET training during the 1995-96 project year. Eventually METNET will connect to Internet.

Literacy instruction is available to several localities via television broadcasts, including the Montana State Prison system. Computer assisted instruction is utilized within the low security prison programs.

There are also about 300 satellite downlink sites in state, which includes most of the state's ABE centers, including localities without an ABE Center. Among the communities receiving satellite programs are Babb, Heart Butte, Starr School, Baker, Fairview, Glasgow, Plentywood, Poplar, Sidney, Terry, and Wolf Point.

**STAFF DEVELOPMENT**: A unique interactive program, "Satellite Delivered Teacher Inservice," provides technical assistance. A satellite capture license permitted the broadcast to be taped and made available on a loan basis to literacy providers. At least seven other sites repllicated this taping concept.

Telecommunications are being used extensively in adult education programs throughout the state. EDUNET installed an electronic mail system and trained staff at seven sites. The most recent locations to get online were Dillon, Butte, Pablo, the Montana State Library (SLRC), Browning, Havre, and Hardin.

## NEBRASKA

**STATE STAFF CONTACT:**
Mr. Burney Bouslough
Director, Adult and Community Education
Department of Education
301 Centennial Mall South
P.O. Box 94987
Lincoln, Nebraska 68509
(402) 471-4807

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is being used in programs where the local provider agency has computers, usually Apples and IBM's. Equipment owned by the local adult basic education programs is extremely limited because of inadequate funding. Audio visual equipment that is owned by local ABE programs is virtually non-existent at this time. There are some tape players in a few programs, but programs must essentially rely on the sponsoring institutions to provide audio/visual equipment when the need arises. Distance learning technology augments instruction through the broadcast of the GED-ON-TV series.

## NEVADA

**STATE STAFF CONTACT:**
Ms. Phyllis Rich
Adult Basic Education Consultant
State GED Administrator
Nevada Department of Education
Adult and Continuing Education
400 W. King Street
Capitol Complex
Carson City, Nevada 89710
(702) 687-3134

**INSTRUCTIONAL APPLICATIONS**: Among the computers being used in literacy classes are Apples, the PALS system, and the JOSTEN's systems. Other instructional equipment includes calculators, controlled readers, film projectors, VCRs, television, overhead projectors, camcorders, satellite up- and down-link programs, compressed video and taped lessons.

ABE programs are serving county jail inmates through computer labs purchased with money raised by the inmates. Results show that reading levels for ABE students have increased three grades as a result of 60 hours of instruction. ESL reading level increases are not as dramatic because of the available software and the fact that students are acquiring literacy skills in a second language.

Nevada's allocation of Federal funds expanded the existing State Literacy Resource Center (SLRC) located in the State Library in Carson City and added satellite SLRC facilities at Las Vegas-Clark County Library and in Northern Nevada Community College.

The telecommunication capacities of the local adult education programs has increased. In fiscal year 1994-1995 ABE projects were linked electroncially across the state.

## NEW HAMPSHIRE

**STATE STAFF CONTACT:**
Mr. Art Ellison
Supervisor, Adult Basic Education
Department of Education
101 Pleasant Street
Concord, New Hampshire 03301
(603) 271-6698

**INSTRUCTIONAL APPLICATIONS:** Sixty percent of the programs funded have computers for computer assisted instruction. The State ABE Office, in collaborating with the New Hampshire public broadcasting station, continues providing GED review courses via television.

## NEW JERSEY

**STATE STAFF CONTACT:**
Mrs. Loyola Garcia
Educational Planner
Bureau of Adult Education
and Literacy
CN 500
Trenton, New Jersey 08625-0500
(609) 984-4974

**INSTRUCTIONAL APPLICATIONS:** Computers are supplementing writing instruction to lower level students, basic adult literacy instruction and writing and math instruction to high school completion students. The State Office encourages the inclusion of computer assisted instruction in adult literacy programs whenever resources have become available. The majority of programs have access to or have purchased other equipment, such as tape recorders, overhead projectors, video recorders and monitors.

Distance learning capacity is expanding. Six down link sites have been designated throughout the state as videoconference locations. New Jersey has joined with PBS and the National Center on Adult Literacy to offer programs for adult educators. In addition, public television broadcasts the both the KET LEARN TO READ and the GED-ON-TV series.

## NEW MEXICO

**STATE STAFF CONTACT:**
Doug Richardson
Adult Basic Education
Department of Education
Education Building
300 Don Gaspar
Santa Fe, New Mexico 87501
(505) 827-6672

**INSTRUCTIONAL APPLICATIONS:** Adult learning centers are using technology to facilitate learning. Computers, as well as audio visual materials are available for individualized instruction. Sixteen programs provide computerized guidance information services.

## NEW YORK

**STATE STAFF CONTACT:**
Mr. Roberto Reyes
Interim Team Coordinator
Continuing Education Team
State Education Department
Washington Avenue
Albany, New York 12234
(518) 474-8892

**INSTRUCTIONAL APPLICATIONS:** The state adult education staff is encouraging the use of instructional technology. Currently about one-half of the programs use computer assisted instruction. The State Office is surveying the use of CAI in local programs. The staff is also building a consulting capacity to provide technical assistance to local programs.

The KET/GED program is offered by the nine PBS stations across the state. Eleven sites coordinate with the stations to offer technical assistance to viewing students. The broadcast rights have also been purchased for the Spanish GED-ON-TV program. A technical assistance project to serve these programs has been implemented. Television programming has also been expanded to include the KET LEARN TO READ series.

A technology software evaluation guide will be published by the State Office. A searchable database of software applicable to adult education and literacy is under development.

**STAFF DEVELOPMENT:** Staff development efforts were expanded through the use of technology. A two part video series was developed to train ESL teachers to administer the New York State Place Test (NYSPLACE). The first tape provides information on the nature of the NYSPLACE Test and the placement of English Speakers Of Other Languages students. The second tape provides training on the scoring of the test through a simulated test situation. In addition, family literacy curriculum materials were developed this year which included to assist teachers in implementing an intergenerational approach to learning.

## NORTH CAROLINA

**STATE STAFF CONTACT:**
Mr. Bobby Anderson
Director, Basic Skills
Department of Community Colleges
200 West Jones Street
Raleigh, North Carolina 27063-1337
(919) 733-7051

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is used in all 58 community college sites. PLATO is used in all of these sites along with other software programs. Project Ready at Peidmont Community College developed a digitized audio survey which aids in identifying student learning styles.

Workplace literacy efforts continue. The State Office began a workplace literacy initiative to place computer labs at work sites to serve small businesses. North Carolina State University and the Foresyth Technical Community College are developing software to increase the literacy skills of textile emloyees.

Distance learning technology is also being utilized to increase access to literacy instruction. The State television network and a satellite system broadcasted two 20-week literacy series. The workplace basic skills program at Mitchell Community College has a computer networking system that facilitates literacy instruction by linking employees electronically at several companies to an educational program.

**STAFF DEVELOPMENT:** The state "information highway" telecommunications system was used to plan staff development workshops in the areas of workplace skills and ESL instructional skills. In addition, Appalachian State University developed a series of videotapes to be used in training basic skills instructors.

## NORTH DAKOTA

**STATE STAFF CONTACT:**
Mr. G. David Massey
Director, Adult Education
Department of Public Instruction
600 Boulevard Avenue East
9th Floor, State Capitol Building
Bismarck, North Dakota 58505-0440
(701) 224-2393

**INSTRUCTIONAL APPLICATIONS**: A variety of technology is augmenting literacy instruction. Computer assisted instruction is available, with Apple and IBM computers being used frequently. Distance learning technology is providing through the Mind Extension University and through state-owned broadcasting facilities. All literacy centers are connected electronically to the State Office, other literacy centers, and the State Library.

**STAFF DEVELOPMENT**: Staff at literacy instructional centers have been trained in the use of the state-wide electronic communication system and are now on-line.

## OHIO

**STATE STAFF CONTACT:**
Mr. James A. Bowling
Assistant Director, Division of
Vocational and Career Education
933 High Street, Suite 210
Worthington, Ohio 43085-4046
(614) 466-5015

**INSTRUCTIONAL APPLICATIONS:** The use of computer assisted instruction continues to vary among the provider agencies. Most programs have CAI as one of the available instructional methods. All adult prisons currently have access to basic literacy instruction through CAI, with new technology being added and updated as needed. The State Interagency ABLE/JOBS Agreement between the Ohio Department of Education and the Ohio Department of Human Services has allowed for expansion dollars to be used to purchase hardware and software for instructional purposes.

The four Adult Basic and Literacy Education (ABLE) Regional Resource Centers, in operation since FY93, provide instructional staff with access to a variety of resources, including videos and cassette tapes.

ABLE programs located within school districts, community colleges, and vocational schools have been involved with distance learning and satellite broadcasts on a limited basis. This area is expected to continue as more LEA's acquire advanced technological capabilities.

Local ABLE programs are involved in efforts to electronically link up with other local providers (i.e., JOBS, JTPA) to share customer data. Information and referral systems have resulted from cross-linkage teams coming together to find ways to better serve adult learners.

**STAFF DEVELOPMENT:** Much of the staff development efforts in Ohio are carried out through the Ohio Literacy Resource Center (OLRC). The Resource Center is providing presentations, demonstrations, and training on electronic information systems and on the Ohio Adult literacy Servers Information System. Working with the OLRC, the four ABLE Regional Resource Centers have made training accessible to the local programs. Through the training local service providers learned how to electronic mail communication and Internet. Because the Regional Centers are linked to the State Center, cross sharing of information and resources occurs in most areas. In addition, the OLRC publicized alternative methods of information access including libraries, freenets and

proprietary service providers.

Distance learning technologies are being used to extend staff development. The OLRC has facilitated and hosted statewide satellite teleconferences for the last three years. The four ABLE Regional Resource Centers have hosted teleconferences and all have been taped.

Among the other technology-related activities being initiated by the OLRC in 1995 are:

o Continuation of computer training both on introductory and advanced levels;
o Establishment of an Adult Literacy Internet List designed for Ohio providers (administrators and instructors);
o Establishment of an Adult Literacy Internet List designed for new readers/learners in Ohio;
o Exploration of available software as well as development of interactive educational software; and
o Implementation of Internet resources into instructional programs.

## OKLAHOMA

**STATE STAFF CONTACT:**
Mrs. Linda Young
Coordinator, Lifelong Learning
Department of Education
Oliver Hodge Memorial Education Building
2500 N. Lincoln Boulevard, Room 180
Oklahoma City, Oklahoma 73105-4599
(405) 521-3321

**INSTRUCTIONAL APPLICATIONS:** Some programs use computers on an informal basis. Severe fiscal constraints limit the purchase of computers, since the state cannot afford to buy and use computers and other technology on a systematic basis.

**STAFF DEVELOPMENT:** Teachers are receiving training concerning instructional applications of software programs. They are also receiving assistance in selecting software appropriate for their programs.

## OREGON

**STATE STAFF CONTACT:**
Dr. Donna M. Lane
Assistant Commissioner
Office of Community College Services
255 Capitol Street, N.E.
Salem, Oregon 97310-0203
(503) 378-8585, ext. 359

**INSTRUCTIONAL APPLICATIONS:** The state adult education staff encourages the use of instructional technology in adult basic education and literacy programs throughout the state. As a part of these efforts, the state staff are participating in the Adult Basic and Literacy Educators network with Washington state. A technology representative from each adult education program works with the network. To support the further expansion of computer assisted instruction, the state staff is reviewing software so that better choices can be made concerning the purchase of instructional software materials.

Distance learning technologies are also in use. KET/GED tapes are broadcast widely throughout the state. A part time coordinator of televised delivery services is working to strengthen this effort.

**STAFF DEVELOPMENT:** Several tapes were developed and disseminated to facilitate training literacy tutors.

## PENNSYLVANIA

**STATE STAFF CONTACT:**
Ms. Cheryl Keenan
Director, Bureau of Adult,
Basic and Literacy Education
Department of Education
333 Market Street, 6th Floor
Harrisburg, Pennsylvania 17126-0333
(717) 787-5532

**INSTRUCTIONAL APPLICATIONS:** Many programs use a variety of CAI systems, including the PALS system. CD-Rom software is a new approach to teach members of the Philadelphia Indochinese community.

The Tri-County Opportunities Industrialization Center, Inc. developed a manual to assist instructors in selecting shareware software programs. The manual provides information for each of the 43 shareware packages reviewed concerning subject area, instructional content, evaluation, applicability to adult learners, hints for teachers, ordering information, and assistance in using the shareware package.

A video series, "On Your Own," was produced by Penn State University's public television station, WPSX-TV and Cambridge Books. The series contains 33 segments which range in length from five to fifteen minutes. The series provides instruction in reading, writing, math and grammar at the fifth through eighth grade levels. A multicultural cast perform in vignettes which depict basic skills applications in life situations. Teachers are using the series for direct instruction, to augment instruction, as a review for students between classes, and to help volunteer tutors.

**STAFF DEVELOPMENT:** The States's AdvancE Resource Center assisted in staff development by responding to 1,181 requests for technical service, materials and visitations. The Center loaned 2,715 items to adult educators.

## RHODE ISLAND

**STATE STAFF CONTACT:**
Mr. Robert Mason
Adult Education Specialist
Department of Education
22 Hayes Street, Room 222
Roger Williams Building
Providence, Rhode Island 02908
(401) 277-2681

**INSTRUCTIONAL APPLICATIONS:** Four comprehensive adult education centers and five community based organizations have expanded their capability to augment instruction through the use of computers. These programs employ computer assisted instruction to help prepare adults for the GED examination, to deliver basic academic skills instruction, word processing and desktop publishing skills and to provide English as a Second Language instruction. One adult education center has experimented with permitting program participants to bring lap-top computers to different instructional sites.

Television is another technology being used to deliver instruction. In 1994-95 two complete cycles of the GED-ON-TV Series were broadcast with the cooperation of the state's PBS television station. The Rhode Island Regional Adult Education Center also broadcast an instructional series throughout the state over a cable television interconnect system. Teaching sessions included a review of the academic skills to be demonstrated or discussed during each GED-ON-TV program, a review of the materials to be used and the pre-teaching of any new or difficult concepts. The tapes also contain the "on-air" answers to questions from adult learners.

Another technology application is the tele-instruction network centered in the Department of Education. Established with the assistance of a Literacy Challenge Grant from the Gannett Foundation in 1988, the system has the capacity to link up to seven remote sites with two way audio via telephone and a "conferencing telephone bridging" system. The Department is maintaining this system and work to expand its use in order to reach groups, in both urban and rural areas, who are prevented from obtaining services because of a physical handicap, lack of child care or inadequate transportation.

Other areas have been identified for expanded technology applications. These included action research to document the effects that computer training has on learning gains, networking and accessing data bases such as Internet, and using computers and other technology to serve both learning disabled and

physically disabled adults.

**STAFF DEVELOPMENT:** Staff development activities are being carried out at both the state and local levels. The state staff is utilizing a series of KET video conferences for inservice efforts. The videos cover topics such as assessing learners, implementing individualized instructional strategies, teaching math and working with adults with learning disabilities. At the local level, staff development programs were conducted on computer assisted instruction.

## SOUTH CAROLINA

**STATE STAFF CONTACT:**
Mr. Sam Drew
State Director
Office of Community Education
South Carolina Department of Education
1429 Senate Street
403 Rutledge Office Building
Columbia, South Carolina 29201
(803) 734-8563

**INSTRUCTIONAL APPLICATIONS:** Virtually all local adult education and literacy programs have access to at least one computer, with some programs having access to several computers or to a computer lab. A variety of software is used, including materials from Jostens, WICAT, and CCC.

Educational television programming is available to all homes on regular television. Video tapes of instructional broadcasts are available to local ABE programs. Instructional programs have been broadcast over television for adults who either cannot or will not actively attend an adult education class. Both the state educational television network and commercial television stations have cooperated in broadcasting basic literacy instruction and GED preparation.

A mobile literacy training center, in the form of a 32-foot long vehicle called The Coach, is being used to expend the literacy skills of South Carolinians. The mobile van was purchased by the SCANA Corporation. It is a collaborative effort between the Governor's Office, the South Carolina Department of Education, and SCANA. In The Coach, 12 interactive computers are used in teaching reading, math, job skills, life skills, and vocational training. The software available on the mobile literacy van is enabling instructors to assess the educational needs of local residents and then to customize an instructional program to address them.

**STAFF DEVELOPMENT:** Through a 353 project, "Teaching the Adult," fifteen video tapes were developed, along with accompanying print components, to train practitioners in developing and delivering programs to adult students served by public schools. Within the flexibility of the video delivery, adult educators can learn specific methodologies to address the particular needs and characteristics of adult learners. Each tape is 24-25 minutes in length. The tapes feature adult education settings and practitioners through South Carolina, as well as interviews with some national experts.

## SOUTH DAKOTA

**STATE STAFF CONTACT:**
Mr. Gene K. Dickson
Adult Education
Office of Adult, Vocational
and Technical Education
700 Governors Drive
Pierre, South Dakota 57501-2291
(605) 773-4716

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is available, with Apples and IBM computers being used at most local program sites. The South Dakota Literacy Council, as well as local adult basic education programs, have been provided ABE money to introduce and expand technology into their instructional programs. For institutionalized adults, emphasize is being placed on using new or expanded technology to help motivate learning within the institutional setting.

Instructional technology is supported, in part, through 353 funds. Funding criteria for the projects include using advanced technology for prescriptive and diagnostic teaching techniques, and promoting the use of new technology.

Distance learning strategies are being encouraged through participation in the telecommunications system, DiAL-IN. The State Literacy Resource Center System is interested in the telecommunication applications availble through the DiAL-IN system.

**STAFF DEVELOPMENT:** ABE program staff participated in four Rural Development Telecommunications Network (RDTN) systems meetings of adult educators and literacy volunteers. The RDTN provides two way interactive audio/video communication between sixteen local sites throughout the state. This technology has greatly improved the participation and communication among adult education and literacy practitioners.

The South Dakota State Literacy Resource Center System tapes satellite broadcasts that are of interest to adult education and literacy personnel. The tapes are then loaned to interested teachers and administrators.

## TENNESSEE

**STATE STAFF CONTACT:**
Mr. Phil White
Executive Director
Division of Adult
and Continuing Education
Department of Education
1130 Mensler Road
Nashville, Tennessee 37243-03387
(615) 741-7054

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is used in many localities. Among the computer systems being used are PALS labs, Apple computers, CCC system. Computers, purchased with Tennessee Valley Authority funds, were installed in five western counties. As a part of this installation, computer labs are being installed in the schools and terminals are being placed in local businesses. Additional terminals will be added as they are needed. The ABE program is piloting a satellite program in eastern Tennessee to help rural communities.

## TEXAS

**STATE STAFF CONTACT:**
Dr. Pavlos Roussos
Program Director, Adult Education
Division of Adult Education and Employment
Training, Funding and Compliance
Texas Education Agency
1701 North Congress Avenue
Austin, Texas 78701
(512) 463-9294

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is being used in many adult education cooperatives. The computers used include IBM's, the PALS systsem, Apples, and Macs. Twenty-three co-ops have Independent Learning Systems. Some programs are using interactive video disks. One program was funded through a 353 grant to pilot the use of hypergraphics.

Distance learning strategies are providing live interactive television technology to deliver GED instruction to multiple sites. Video tapes of the lessons are available from the Region IV Education Service Center.

**STAFF DEVELOPMENT:** Training in the use of television instruction and computer-assisted instruction was provided to several local programs.

## UTAH

**STATE STAFF CONTACT:**
Dr. Brent Gubler
State Director, Adult Education Services
Utah Office of Education
250 East 500 South Street
Salt Lake City, Utah 84111
(801) 538-7844

**INSTRUCTIONAL APPLICATIONS:** The use of instructional technology was expanded through 353 funds, which supported development of an extensive networked computerized instruction system for adult basic education and adult high school programs. The Utah Adult High School Completion Program and the Adult Basic Education Program were implemented at five applied technology centers.

## VERMONT

**STATE STAFF CONTACT:**
Sandra Robinson
Career and Lifelong Learning
Department of Education
State Office Building
Montpelier, Vermont 05602
(802) 828-3134

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is being used in some areas of the state and in students' homes. A workplace literacy project in Rutland is using tutor-active computerized Instruction tailored to the needs of General Electric plant employees.

Interactive television, cable television and the educational television network are used extensively throughout the state to provide instruction. Vermont Interactive Television broadcasts adult basic education and GED instruction. The system connects studies in six sites around the state through the use of compressed video, real-time audio, fax and modem. The adult learners view the programs at one of the learning sites. Each site has a facilitator, a dedicated telephone line, a coder/decoder device, a television camera, and microphones which enable program enrolless at any site to see and speak with learners at the other sites. Programs prepared and viewed in this format include "History from a Different View" and "GED Math." A new program, "GED Science," is currently being prepared. Each class broadcast is filmed on video tape. Copies of the tape are then sent to students requesting them.

A pilot use of video telephone instruction is getting underway in the northern part of the state, which uses video telephone instruction. Cable television and the Educational Television Network are also providing instruction.

## VIRGINIA

**STATE STAFF CONTACT:**
Dr. Lennox L. McLendon
Associate Director, Adult Education
Department of Education
P.O. Box 2120
Richmond, Virginia 23216-2120
(804) 225-2075

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is augmenting instruction in many adult literacy programs. Three computer equipped vans provide literacy to adults in rural communities.

Teachers and students in the learning lab at Washington County Skill Center evaluate computer software and publish evaluations the state adult education newsletter. They also provide adult education practitioners with telephone consultation concerning appropriate software.

A distance learning initiative, "Virginia Reads," is a live interactive instructional program for adult beginning readers. It airs two afternoons a week on public broadcasting and features a call-in segment which permits adults from across the state to read lesson passages and participate in on-air activities. In addition, GED-ON-TV airs state-wide on all public stations.

**STAFF DEVELOPMENT:** Teleconferences from the National Council for state Directors of Adult Education and the National Center for Adult Literacy are downlinked for staff development.

## WASHINGTON

**STATE STAFF CONTACT:**
Dr. Patricia Green
Director, Office of Adult Literacy
State Board for Community and
Technical Colleges
P.O. Box 42495
Olympia, Washington 98504-2495
(206) 664-9402

**INSTRUCTIONAL APPLICATIONS:** All paid programs have computers which are used for instruction, while about one-half of the volunteer programs have computers. Nine stand alone systems software packages were evaluated through support from 353 funds. In addition, most programs utilize audio-visual and technology-based instructional equipment.

**STAFF DEVELOPMENT:** Washington also participates in the Northwest Regional Literacy Resource Center Technology Project. A staff member works with resource people at programs in Oregon, Idaho, Alaska, and other areas of the state to promote the use of technology in ABE and ESL programs; to evaluate software, videos and other technologies; and to present staff development workshops on the use of instructional technology. The project has three current publications: the *ESL Technology User's Guide*, 1994 Edition; the *Software Buyer's Guide*, 1993 Edition; and the *Video User's Guide*, 1992 edition. In October of 1994, a teleconference was sponsored by the Northwest Regional Literacy Cernter to highlight technology being used in the adult education classrooms across the four states in the consortium (Washington, Oregon, Alaska, and Idaho).

## WEST VIRGINIA

**STATE STAFF CONTACT:**
Ms. Kathi Polis
Assistant Director, Adult Education
Department of Education
Building 6, Room 230
Capitol Complex
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305
(304) 558-6318

**INSTRUCTIONAL APPLICATIONS:** All full time programs have computer assisted instruction. A computer networking system exists in the state. IBM computer labs in 73 vocational centers and comprehensive high schools are available for use by the ABE learning centers located there.

The IBM Corporation, as part of a 1986 cooperative agreement with two of West Virginia's full-time ABE centers, donated 30 IBM computers to ABE programs. As part of this agreement, personnel at one center field tested IBM software to determine its appropriateness for adults and to make recommendations for changes to make the software more appropriate for use by adult learners. At the end of the project, IBM donated all of its educational software to the ABE program. IBM entered into another agreement in 1989 with the state to develop an adult continuum of basic skills software, including instruction to cover all literacy levels in all subject areas.

Through the Televised Adult Basic Education Program, the West Virginia State Department of Education is broadcasting adult literacy, basic education, and secondary instruction on public television. The broadcasts, begun in 1987, feature three levels of instruction from the KET series. The LEARN TO READ component is designed for nonreaders, the ANOTHER PAGE component helps intermediate readers and the GED-ON-TV component enables adults study for their high school diploma. In addition, MATH BASICS, a series of 15 half-hour programs taught by outstanding math teachers, is being broadcast.

VCRs are also augmenting instruction. Full-time ABE teachers produced and video taped a low level reading series for adults which was aired over local television stations and distributed to ABE classes for use throughout the state.

**STAFF DEVELOPMENT:** Yearly inservice training provides information to teachers concerning the use of advanced technology for instruction, class management and monthly and yearly reporting requirements. Inservice programs have been delivered via video

teleconference since 1988. Video tapes are also used frequently for staff development activities. All inservice sessions, both local and statewide, are video taped and loaned to ABE personnel. This lending library will continue to be expanded with state- and commercially-prepared tapes which will be useful to teacher in improving their curriculum and teaching techniques.

## WISCONSIN

**STATE STAFF CONTACT:**
Ms. Mary Ann Jackson
Adult Basic Education Consultant
Wisconsin Technical College System Board
310 Price Place
P.O. Box 7874
Madison, Wisconsin 53707
(608) 2677-9684

**INSTRUCTIONAL APPLICATIONS**: Technology is utilized in all programs. Up to 25 percent of any state funded grant may be used for computer hardware and software.

Computer assisted instruction is being used extensively, including the state prison system. Among the software programs being used are the PALS system and Modumath, which is being used successfully in ABE programs, prisons, and workplace literacy programs.

Interactive television (ITV) is being used to broadcast instruction to prisons which have an instructional television capacity. In the Fox Valley District a basic skills reading/study skills course was broadcast into the Oshkosh Correctional Facility.

**STAFF DEVELOPMENT**: ITV is being used for teacher inservice. In the rural Northcentral District, interactive television fixed service broadcasts staff development activities.

## WYOMING

**STATE STAFF CONTACT:**
Mr. Lloyd Kjornes
Coordinator, Adult Education
Department of Education
Hathaway Building
Cheyenne, Wyoming 82002
(307) 777-6228

**INSTRUCTIONAL APPLICATIONS:** Computer assisted instruction is employed in most programs. Meetings for local program directors, the State Director and the State Literacy Resource Center staff are conducted via compressed video.